

One of the most interesting and novel of all the speculations on the use of tobacco was submitted to the British Association for the Advancement of Science as its late session, and the information afforded will be well received by that large class of persons who indulge in the use of the weed. Dr. Richardson first contrived an automatic smoker, into whose mouth pipe-stem and cigars and moerschaums were placed, and the smoke from them being caught and collected, enabled him to determine the products of the combustion. These he determined as, 1, water; 2, free carbon; 3, ammonia; 4, carbonic acid; 5, nicotine; 6, an empyreumatic substance of a resinous bitter extract. He says:

The water is in the form of vapor, "the carbon, in minute particles suspended in the air, and the nicotine, being the eddies of smoke their blue color, the ammonia is in the form of gas combined with carbonic acid; and the carbonic acid is partly free and partly combined with ammonia. In this combination, he says, being a non-volatile body, remains in the pipe; the empyreumatic substance is a volatile body and is carried off by the wind. The composition of which the Doctor conjectures, of which we are, however, as yet, myself unacquainted, but which we have ventured to consider as resin. Whatever it is, it is that which gives the tobacco its peculiar odor, and which determines the flavor of a cigar. It adheres powerfully to woollen materials, and when concentrated has a most obnoxious and intolerable smell. The odor of the tobacco is produced, I think, probably having an alkaloid as a base. It is not volatile, and only carries along a fluid form.

As to the various reasons for being inured to the use of tobacco are innumerable. Simple tobacco that has not undergone fermentation yields very little free carbon, much ammonia, carbonic acid, and water, and is, therefore, not empyreumatic and an equally small quantity of bitter extract. The Latakia yields the same products uniformly, the Turkish generally more ammonia, and all these products, however, are considerably in its constituents. The Latakia yields very little ammonia; the Swiss cigars yield enormous quantities of ammonia, and so dry the tobacco that it is not possible to smoke. Connecticut tobacco is comparatively little in taste, from the absence of the bitter extract.

EFFECTS OF SMOKING.

The water vapor of smoke is not irritating to the lungs, but settles in the mucous membrane and irritates the throat. The narcotic effect of tobacco smoke, if received into the lungs, resides in the carbonic acid; the ammonia, and all these, produce a listlessness of the blood corpuscles, suppression of the urinary secretion and yellowness of skin, quickening and then reducing the pulse, and faintness. In young persons, it produces nausea. It is doubtful whether all these effects are to be ascribed to the carbonic acid. If so, some of our mineral waters, so freely used, and which are the basis of many of our remedial agents as they are generally esteemed.

The empyreumatic substance seems to have little effect, except in giving the tobacco taste, to tobacco smoke, and after awhile of making the breath of smokers unbearable. "Nicotine is rarely ever inhaled by the cleanly

only those who smoke cigars by holding them in the mouth, or dirty pipes saturated with oily matter. When absorbed, its effects are injurious, such as palpitation of the heart, vertigo, and a stiffness of the muscles, and great prostration. It will not, of itself, produce vomiting; it is the ether extract which is the cause of this, and the gaseous bodies and the carbon. Wooden pipes and pipes with glass stems are injurious. Cigars should never be smoked to the end; otherwise they are more injurious than cigars smoked to the point where they can be cast aside as soon as one-half is smoked, and always smoked from a porous or absorbent tube. Pipes are much more injurious than cigars. The best pipe is a long clay pipe; next to this, the meerschaum is the most wholesome. Richardson says the perfection of a pipe will be found in a meerschaum bowl, an amber mouthpiece and a clay stem. All attempts at pipes to consume the oil have thus far failed. Every smoker should be careful of the amber in which he smokes. A short oil pipe is the unhealthiest.

The fashion of meerschaum has largely prevailed in this country of late years. The material is imported in blocks, and is cut into the desired form, some very handsome and costly. The price ranges as high as five to fifteen dollars. The proprietors of good meerschaum think as much of it as of diamonds. It is not polished, which is the result of absorbing the oil of the tobacco, it not only comes beautiful in his eyes, but the smoke is said to be sweeter for his taste. The cheapness of the material, notwithstanding the heavy tax on tobacco manufactures, the demand has in no way fallen off, but the contrary.

**ADVANTAGES OF PENCIVATION.** Pencivation, the new method of curing tobacco, has been the subject of many experiments, cannot be too sedulously studied. The following record, in a country paper, of the growing startling account of Lord Cameron's appearance in the House of Commons, is a fair illustration of the effect shown on his head, a white hat upon feet, large but well polished boots on his brow, a dark cloud of hair on his head, and faithful walking stick in his hand, the cheering crowd saying nothing but—*Down with the rebels!*

Frederick Cameron, a Baptist minister of Kentucky, was lately conscripted for the Union army. His congregation told him to buy him a substitute, but going then he would lead to the rebel army as many as would follow him, rather than allow a substitute to go into Federal army for him. He went with 235 followers. He had taken the oath of amnesty.